



Something to sink your teeth into: Pediatricians advised on how to assess patients for caries, educate families on oral health issues

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Pediatricians advised on how to assess patients for caries, educate families on oral health issues

by Kevin J. Hale, D.D.S., FAAPD

Editor's note: This is the last in a three-part series of AAP News articles looking at oral health assessment and intervention in very young patients, as outlined in the AAP Policy Statement, Oral Health Risk Assessment Timing and Establishment of the Dental Home (Pediatrics. 2003;111:1113-1116).

It has been two months since the AAP oral health policy debuted, and interest among pediatricians and dentists continues to grow. The long-held intent of the policy's authors has been the development of a forum for professional interaction that enhances communication and awareness, and results in improved oral health for the children of this nation. This vision is based on increasing the community pediatrician's competence and comfort level in assessing a family's dental history, diet behaviors and infant's dentition.



Dr. Hale

This article brings together the concepts and tools provided in the previous two articles and discusses how to apply them in practice. Following are the nuts-and-bolts of an oral health risk assessment, including how to clinically assess patients, educate families about oral health and advise parents and families on issues of diet, hygiene, fluorides, etc.

Clinical assessment

The clinical assessment is the first step in determining a patient's oral health status. The ideal armamentarium for this facet of the assessment is a good light source, gloves and a toothbrush.

After examining the soft tissues of the mouth, look at the gingival margin where the tooth meets the gums on the facial aspect of the maxillary anterior teeth. If an infant is going to present with early childhood caries (ECC), this usually is where you will see it first.

You are looking for two things. First, determine if plaque is present. Plaque is off-white to yellow, soft and sticky and is easily removed with a toothbrush. Second, brush the teeth at the gum line and then wait for three to five seconds to see if the gums begin to bleed. Bleeding is a sign of inflammation and usually means that plaque has been sitting on the gums for some length of time. Using the two variables of plaque and inflammation allows you to determine where to direct parent education. (See below.)

General oral hygiene assessment		No Plaque	Plaque
		No Inflammation	Compliance
Inflammation	Performance Brushing	Non-Compliance	

Ideally, you will detect no plaque or inflammation. This indicates the parents are following good diet and hygiene regimens.

The obvious presence of both plaque and inflammation are indications that the parent requires instruction on effective tooth brushing technique and diet counseling.

If you detect inflammation without the presence of plaque, it usually indicates performance brushing. It is not uncommon for parents to brush their child's teeth thoroughly prior to an appointment. Counseling regarding the importance of periodic oral hygiene is indicated. Encourage the parent and tell him or her that two or three days of good brushing will have the gums back to health.

If you detect plaque with no inflammation, it generally is an indication that the patient is consuming significant amounts of sugared fluids that have selected for the most aciduric, cariogenic organisms in the plaque matrix. As detailed in the previous articles, these sub-populations of bacteria are characterized by and capable of fast reproduction and plaque production. While the parents may report brushing the infant's teeth, the production of plaque outpaces their ability to keep the teeth plaque-free due to diet. Since the parent is brushing the teeth, the plaque is not present long enough to induce significant inflammation. Inquire about the child's between-meal fruit juice consumption. Cruising with a sippy cup filled with juice is bad not only for the child's diet but also is hard on new teeth.

Once the plaque and hemorrhage are removed from the teeth, look for a white, chalky demineralization. This etching of the teeth is caused by acids in the plaque matrix and is the beginnings of a cavity. If possible, refer this patient to a dentist immediately. Enamel etching can quickly move to ECC.

If the enamel already is eroded away, the patient probably has ECC and an immediate referral is indicated since small cavities can become rampant quickly.

Keep in mind that a thorough examination of the dentition requires a mirror, dental explorer, radiographs and years of experience. Don't hesitate to refer when you are not sure. Dental decay moves fast, and the youngest patients often are the most difficult for the dentist to treat.

Parent, patient education

Oral health education for the parent and infant is directed toward two goals. The first is to develop a program for the mother (or other intimate care provider) that delays colonization while enhancing the mother's levels of benign oral flora. The second is to establish and maintain microbial diversity in the infant's mouth through modification of dietary practices, good oral hygiene and judicious administration of fluoride modalities. Although the concept of benign flora enhancement (BFE) is essential to all caries prevention and management, the application of the concept varies with age. Therefore, recommendations differ for mother and infant.

General anticipatory guidance for the mother (or other intimate caregiver) prior to and during colonization should include the following:

- **Removal of all active decay.** Parents should be referred to a dentist for an examination and restoration of all active decay as soon as feasible.



The absence of plaque or inflammation of the gums during the clinical assessment of a young patient's mouth indicates the parents are following good diet and hygiene regimens.

- **Diet.** The parent should be instructed to avoid carbonated beverages and to consume 100% fruit juices only at meals.
- **Hygiene.** The parent should be instructed to brush thoroughly twice daily and floss once daily.
- **Fluoride.** The parent should be directed to use an American Dental Association – approved toothpaste and rinse with an alcohol-free, 0.05% fluoride rinse before bed.
- **Xylitol chewing gums.** Recent evidence suggests that the use of xylitol chewing gums four times a day can significantly decrease the child's predisposition to ECC.
- **Delay of colonization.** Parents should be educated against sharing spoons and cleaning dropped pacifiers with their saliva. (Yes, mothers should kiss their babies!)

General anticipatory guidance for the infant or child should include the following:

- **Diet.** After the eruption of teeth, the parent should provide milk and water between meals and 100% fruit juice (not to exceed 1 cup per day) only at meals. Carbonated beverages should be excluded from the diet. Infants should not be placed in bed with a bottle containing anything other than water. Ideally, infants should have their mouths cleansed with a damp cloth after feedings.
- **Oral hygiene.** The parent should brush the child's teeth, twice daily, as soon as they erupt and floss the child's teeth as soon as the teeth contact one another.
- **Fluoride.** All children should have optimal exposure to topical and systemic fluoride. Caution should be exercised in the administration of all fluoride-containing products. The specific considerations of the judicious administration of fluoride should be reviewed and tailored to each patient's needs. If fluoridated toothpaste is recommended, the size of the infant's fifth digit fingernail is a reasonable indicator of the amount that should be used.

Timely oral health risk assessments and the general strategies of BFE of the parent and infant, coupled with delayed colonization, should continue until the patient has established a dental home. Do not hesitate to refer a patient you deem to be at risk of ECC, since a timely referral often is critical to avoid invasive dental procedures.

To facilitate effective referrals, it is prudent to cultivate collaborative relationships with dentists in your community. Effective inter-professional outreach often is the first step to providing a continuum of better oral health care for the patients we all serve.

Dr. Hale is a member of the AAP Section on Pediatric Dentistry executive committee.

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